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NEW YORK, NY 10022-2585			PAPER NUMBER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/808,091

Applicant(s)

SASAKI ET AL.

Examiner

Ian N Moore

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 15, 16, 19 and 22 is/are rejected.
- 7) ☒ Claim(s) 13, 14, 17, 18, 20 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Specification*

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: **an apparatus for user connection setting in connection oriented mode communication system**

### *Claim Objections*

2. **Claims 1, 5, 15 and 22** are objected to because of the following informalities: claim 1, recites, "... a currently working communication connection (hereinafter referred to as original connection)..." in line 7-8. For clarity, it is suggested to modify as "...an original connection is a currently working communication connection..." without the parenthesis. Appropriate correction is required.

**Claims 5, 15, and 22** are also objected for the same reason as stated above.

**Claim 1** recites, "**the** source node", "**the** destination node", and "**the** original connection" in lines 9-10. There is insufficient antecedent basis for this limitation in the claim.

**Claims 5, 15, and 22** are also objected for the same reason as stated above.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 6-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Claim 6** recites, "...which is attached with identification information of the original connection **and of which** destination is a receiving side node apparatus..." in line 4-7. It is unclear what is being attached to copied cell data: an identification information of the original connection and destination information of a receiving side node apparatus, or an identification information of the original connection, which the attached cell's destination is a receiving side node apparatus.

**Claim 7** is rejected for the same reason as above since it recites the same limitation as above.

**Claims 8-10** are rejected since they depend on claim 6.

**Claim 10** recites, "...a cell selection control unit which carries out switching from the original connection to the alternative connection by control of selecting the copy cell data while carries out switching from the alternative connection to the original connection by control of selecting the original cell data..." in lines 6-11. It is unclear what is processing being carried out since two opposite processes (i.e. original to alternate vs. alternate to original) cannot be performed at the same time: "switching from the original connection to the alternative connection", "switching from the alternative connection to the original connection".

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1,5,15 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Naohiro (U.S. 6,317,414).

**Regarding Claims 1,5,15, and 22**, Naohiro'414 discloses a node apparatus for use in a connection oriented mode communication system (see FIG. 1, Node 3 or 1 which utilizes ATM VP and VP protection switching in ATM communication system; see col. 6, lines 40-46), comprising:

an alternative connection setting processing unit (see FIG. 1, a combined system Detection section 5-5, 5-6 and VP switch 5-7) for setting a communication connection as an alternative connection (see FIG. 1, VP2 (5-3) substitutive for a currently working communication connection (hereinafter referred to as original connection) (see FIG. 1, VP1 (5-2); note that the combined system detects the alarms, sets and selects the VP2 path as protection/alternative path for VP1 original/working path; see col. 6, lines 45-56)

so that the alternative connection connects the source node apparatus (see FIG. 1, Node 1 where a signal 5-1 is originated/added) and the destination node apparatus of the

original connection (see FIG. 1, node 3, where a signal 5-8 is dropped) to each other by way of a route physically different from that of the original connection (see FIG. 1, a VP2 path 5-3 is the protection which is routed from node 1, via node 2, to node 3, and VP2 is physically different from that an original/working VP1 5-2 path since VP1 is routed from node 1, via node 4, to node 3; see col. 8, lines 45-60; also see FIG. 2 for monitoring and selection; col. 7, lines 35 to col. 8, lines 6), and

a switching control unit (see FIG. 1, VP switch 5-7 must be controlled by the switching processor/controller in order to perform selection/switching as described in FIG. 11, where a node comprises CPU 3-6) for controlling switching between the original connection and the alternative connection (see col. 1, lines 50-61; note that CPU controls the switching in the node).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2,3,11,12,16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naohiro'414 in view of Kojui (JP 07-038573).

**Regarding claim 2**, Naohiro'414 discloses a connection oriented mode communication system as described above in claim 1. Naohiro'414 further discloses a

connection test unit for testing of the alternative connection (see FIG. 1, AIS detection section at node 3 detects/tests the protection path VP1; see col. 6, lines 45-57).

Naohiro'414 does not explicitly disclose testing normality.

However, the above-mentioned claimed limitations are taught by Kojui'573. In particular, Kojui'573 teaches a connection test unit (see FIG. 1, test circuit 200) for testing normality of the alternative connection (see FIG. 1, blocks 2, 4 and 6 of the reserved system connection circuit is chosen and examined for its normality by the test circuit 200; see paragraph 15).

In view of this, having the system of Naohiro'414 and then given the teaching of Kojui'573, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Naohiro'414, by providing the mechanism of the testing the normality of reserved connection circuit, as taught by Kojui'573. The motivation to combine is to obtain the advantages/benefits taught by Kojui'573 since Kojui'573 states at purpose and problems to be solved sections, paragraph 5 that such modification would provide quick and detailed analysis by detailed verification test on the reserved system thereby improving the reliability and performance of an ATM system by efficiently testing active and reserve systems.

**Regarding claim 3**, Naohiro'414 discloses wherein the switching control means is arranged to carry out switching from the original connection to the alternative connection as described above in claim 1. Kojui'573 discloses wherein the switching control means (see FIG. 1, a combined system of individual selection direction circuit 100-103 and their

selectors 50-53) is arranged not to carry out switching from the original connection (see FIG. 1, a connection # 0 via shaded blocks 1,3, and 5) to the alternative connection (see FIG. 1, a connection # 1 via blocks 2,4, and 6) until the connection test unit (see FIG. 1, test circuit 200) confirms the normality of the alternative connection (see 1<sup>st</sup> page constitution; paragraph 13-16, 18-22, 23, 26; note that a test circuit 200's normality results is used as a base for the path detection and selection/setting/switching connection # 1 of the reserved connection).

In view of this, having the system of Naohiro'414 and then given the teaching of Kojui'573, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Naohiro'414, by providing the mechanism selecting and setting the path based on the test result, as taught by Kojui'573 for the same motivation and purpose as described above in claim 2.

**Regarding claim 11**, Naohiro'414 discloses the alternative connection setting processing unit as described above in claim 1. Naohiro'414 further discloses a connection test unit for testing of the alternative connection (see FIG. 1, AIS detection/testing section at node 3), wherein the alternative connection setting processing unit carries out setting processing of test communication connection which leads the alternative connection to the connection test unit (note that AIS detection/testing section at node 3 detects/tests the protection path VP1 which will be used for protection/alternate connection to the AIS detection section; see col. 6, lines 45-57).



Naohiro'414 does not explicitly disclose testing normality, and a test connection setting processing unit.

However, the above-mentioned claimed limitations are taught by Kojui'573. In particular, Kojui'573 discloses a connection test unit (see FIG. 1, test circuit 200) for testing normality of the alternative connection (see FIG. 1, blocks 2, 4 and 6 of the reserved system connection circuit is chosen and examined for its normality by the test circuit 200; see paragraph 15),

wherein a test connection setting processing unit (see FIG. 1, a combined system of system selection circuits 70-71 and individual selection direction circuits 100-103) which carries out setting processing of test communication connection which leads the alternative connection to the connection test unit (see FIG. 1, a combined system of system selection circuits 70-71, individual selection direction circuits 100-103 and test circuit 200 process test connections #1 which leads to connection via the tested protection blocks 2,4, and 6; paragraph 11-25).

In view of this, having the system of Naohiro'414 and then given the teaching of Kojui'573, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Naohiro'414, by providing the mechanism of the testing the normality of reserved connection circuit and a combined system of system selection circuits 70-71 and individual selection direction circuits 100-103 as test connection setting processing unit, as taught by Kojui'573. The motivation to combine is to obtain the advantages/benefits taught by Kojui'573 since Kojui'573 states at purpose and problems to be solved sections, paragraph 5 that such modification would provide quick and detailed

analysis by detailed verification test on the reserved system thereby improving the reliability and performance of an ATM system by efficiently testing active and reserve systems.

**Regarding claim 12**, Naohiro'414 discloses wherein the connection switching control unit includes a test switching unit (see FIG. 1, VP switch 5-7 perform selection/switching), which carries out switching from the original connection to the alternative connection as described above in claim 1. Kojui'573 disclose when the connection test unit (see FIG. 1, a combined system of individual selection direction circuit 100-103 and their selectors 50-53) confirms the normality of the alternative connection (see FIG. 1, test circuit 200 confirms the normality of the alternative connection (see 1<sup>st</sup> page constitution; paragraph 13-16, 18-22, 23, 26; note that a test circuit 200's normality results is used as a base for the path detection and selection/setting/switching connection # 1 of the reserved connection).

In view of this, having the system of Naohiro'414 and then given the teaching of Kojui'573, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Naohiro'414, as taught by Kojui'573 for the same motivation and purpose as described above in claim 11.

**Regarding claim 16**, Naohiro'414 discloses a connection test step for testing of the alternative connection by establishing a communication connection to the alternative connection (see FIG. 1, AIS detection/testing section at node 3 examines the received cells on the protection path VP2 by establishing a protection connection), wherein the connection switching step is arranged to execute switching from the original connection to the

alternative connection when the normality of the alternative connection is confirmed at the connection test step ( note that AIS detection/testing section at node 3 detects/tests the protection path VP1 which will be used for protection/alternate connection to the AIS detection section; see col. 6, lines 45-57).

Naohiro'414 does not explicitly disclose testing normality.

However, the above-mentioned claimed limitations are taught by Kojui'573. In particular, Kojui'573 discloses a connection test step for testing the normality (see FIG. 1, test circuit 200) of the alternative connection (see FIG. 1, blocks 2, 4 and 6 of the reserved system connection circuit is chosen and examined for its normality by the test circuit 200; see paragraph 15),

wherein the connection switching step is arranged to execute switching from the original connection to the alternative connection when the normality of the alternative connection is confirmed at the connection test step ((see FIG. 1, a combined system of system selection circuits 70-71 and individual selection direction circuits 100-103 process test connections #1 which leads to connection via the tested protection blocks 2,4, and 6; paragraph 11-25).

In view of this, having the system of Naohiro'414 and then given the teaching of Kojui'573, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Naohiro'414, by providing the mechanism of the testing the normality of reserved connection circuit and a combined system of system selection circuits 70-71 and individual selection direction circuits 100-103 as test connection setting processing unit, as taught by Kojui'573. The motivation to combine is to obtain the

advantages/benefits taught by Kojui'573 since Kojui'573 states at purpose and problems to be solved sections, paragraph 5 that such modification would provide quick and detailed analysis by detailed verification test on the reserved system thereby improving the reliability and performance of an ATM system by efficiently testing active and reserve systems.

**Regarding claim 19**, Naohiro'414 discloses releasing the setting of the original connection after the original connection and the alternative connection are brought to a state in which an identical user cell can be transmitted through the original connection and the alternative connection (see FIG. 1, note that the bridge copies the user data 5-1 which is transmitted via working path VP1 5-2 for transmission via protection path VP2 5-3 at node 1; also see UPSR algorithm per GR-1400-CORE, see col. 1, lines 15-16); Also, note that the ATM cell which transmits via VP1 includes identification information of the original/working connection (i.e. VP1), source and destination addresses in the ATM cell header). Note that the processing/control system in node 1 provisions and sets the duplicated/copied ATM cell, (copied by the functionality in the Bridge of node 1) which transmits via VP2, with an identification information of the alternate/protection connection (i.e. VP2)).

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Naohiro'414 and Kojui'573, as applied to claims 1-3 above, and further in view of Minami (U.S. 6,744,726).

**Regarding claim 4**, Kojui'573 further discloses a network management unit (see FIG. 1, System selecting circuit 70 and 71), which issues a command of switching from the

original connection to the alternative connection (see FIG. 1, system selecting circuit sends system selection enabling state signal) to the switching control means (see FIG. 1, selectors 50-53); paragraphs 14. Kojui'573 also discloses switching from the original connection to the alternative connection to the switching control means when receiving a notice of normality confirmation (see Kojui'573, paragraph 13-17, the test result for a reserved system is coincident is received at the selectors 3-5) of the alternative connection from the connection test unit (see FIG. 1-3, test circuit 200).

Neither Naohiro'414 nor Kojui'573 explicitly discloses the network management unit receives a notice from the connection unit.

However, the above-mentioned claimed limitations are taught by Minami'726. In particular, Minami'726 teaches a network management unit (see FIG. 1, NMS 30) receives a notice from the connection test unit (see FIG. 1, PVC management controllers 101 or 201 set and controls PVC connection before provisioning, thus it is a test unit; see col. 5, line 13 to col. 6, lines 42; note that NMS receives the a notice requests, responses, alarm indications, alarm clear messages from the PVC management controllers).

Note that the combined system of Naohiro'414 and Kojui'573 teaches switching from the original connection to the alternative connection to the switching control means when receiving a notice of normality confirmation. Minami'726 teaches a NMS receiving the notice messages from the connection setting/testing unit. Thus, the combined system can further modified with NMS, which communicates with the connection setting unit. In view of this, having the combined system of Naohiro'414 and Kojui'573, then given the teaching of Gvozdanovic'720Z, it would have been obvious to one having ordinary skill in the art at the

time the invention was made to modify the combined system of Naohiro'414 and Kojui'573, by providing a NMS which receives a notice messages from the PVC controller units, as taught by Minami'726. The motivation to combine is to obtain the advantages/benefits taught by Minami'726 since Minami'726 states at col. 1, line 24-62 that such modification would achieve rapid fault recovery when a fault occurs on a transmission line between the ATM switches.

which issues a command of switching from the original connection to the alternative connection to the switching control means when the network management unit receives a notice of normality confirmation of the alternative connection from the connection test unit

In view of this, having the system of Naohiro'414 and then given the teaching of Kojui'573, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Naohiro'414, by providing the mechanism selecting and setting the path based on the test result, as taught by Kojui'573 for the same motivation and purpose as described above in claim 2.

7. Claims 6,7,9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naohiro'414 in view of Ellis (U.S. 6,256,292)

**Regarding claim 6**, Naohiro'414 discloses a cell copy unit (see FIG. 1, a copying functionality in the Bridge of node 1) for copying transmission cell data (see FIG. 1, note that the bridge copies the user data 5-1 which is transmitted via working path VP1 5-2 for transmission via protection path VP2 5-3 at node 1; also see UPSR algorithm per GR-1400-CORE, see col. 1, lines 15-16) which is attached with identification information of the

original connection and of which destination is a receiving side node apparatus (see FIG. 1, a receiving side of the destination node 3; note that the ATM cell which transmits via VP1 includes identification information of the original/working connection (i.e. VP1), source and destination addresses in the ATM cell header);

wherein the processing unit wherein carrying out processing for setting identification information of the alternative connection to copy cell data created by the cell copy unit (see FIG. 1, note that the processing/control system in node 1 provisions and sets the duplicated/copied ATM cell, (copied by the functionality in the Bridge of node 1) which transmits via VP2, with an identification information of the alternate/protection connection (i.e. VP2)).

Naohiro'414 does not explicitly disclose wherein the alternative connection setting processing unit includes an identification information setting processing unit.

However, the above-mentioned claimed limitations are taught by Ellis'292. In particular, Ellis'292 teaches wherein the alternative connection setting processing unit (see FIG. 9, a combined system of ATM cell management block 90, STS management block 70, and STS protection controller 115) includes an identification information setting processing unit (see FIG. 9, ATM cell management block 90) for carrying out processing (see col. 13, line 6-65; note that ATM cell managing block process the ATM cells, STS management block maps/copies the ATM cell into corresponding STS, and assigned their respective STS identification number for working/original and protection/copied cells, and STS protection controller switches the cells in both directions per UPSR protocol).

In view of this, having the system of Naohiro'414 and then given the teaching of Ellis'292, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Naohiro'414, by a combined system of a combined system of ATM cell management block 90, STS management block 70, and STS protection controller 115 for processing cells, as taught by Ellis'292. The motivation to combine is to obtain the advantages/benefits taught by Ellis'292 since Ellis'292 states at col. 3, line 1-34 that such modification would efficiently carry ATM traffic by employing UPSR protocol and provide fast protection time.

**Regarding claim 7**, Naohiro'414 discloses wherein the connection switching control unit carries out switching from the original connection to the alternative connection in such a manner that original transmission cell data, which is attached with identification information of the original connection and of which destination is a receiving side node apparatus as described above in claim 5 and 6. Naohiro'414 further discloses that original transmission cell data is made invalid (see FIG. 1, a VP switch 5-7 disconnects the working path VP1 thereby invaliding cells received via node 4) while the copy cell data created by the cell copy unit is made valid (see FIG. 1, a VP switch selects and connects to the protection path VP2 thereby validating duplicated/copied cells received via node 1) as transmission cell data of which destination is a receiving side node apparatus (see col. 6, lines 40-60, see col. 7, lines 42 to col. 8, lines 7; note the VP switch 5-7 uses the copied/duplicated cells which destination address of node 3). Ellis'292 discloses a cell copied control unit (see FIG. 9,



common control processor 100 with UPSR processing functionality which controls cell copies).

In view of this, having the system of Naohiro'414 and then given the teaching of Kojui'573, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Naohiro'414 as taught by Ellis'292 for the same motivation and purpose as described above in claim 6.

**Regarding claim 9**, Naohiro'414 discloses wherein the alternative connection setting processing unit for carrying out identification information conversion setting processing which makes it possible for the node apparatus to receive the copy cell data transmitted from the transmission side node apparatus (see FIG. 1, node 3) as the original cell data transmitted from the transmission side node apparatus (note that an original ATM cells with a header VP1 is copied/duplicated into ATM cell with a header VP2, and both original and copied cells are transmitted from the node 1 to node 3. The combined system of detection section 5-5, 5-6 and switching/selection 5-7 processes the ATM cells received with VP2 from protection path as the ATM cells received with VP1 from working path; see col. 6, lines 29-67). Ellis'292 discloses an identification information conversion setting processing unit (FIG. 9, a combined system of ATM cell management block 90, STS management block 70).

In view of this, having the system of Naohiro'414 and then given the teaching of Kojui'573, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Naohiro'414 as taught by Ellis'292 for the same motivation and purpose as described above in claim 6.

**Regarding claim 10**, Naohiro'414 discloses wherein the connection switching control unit which carries out switching from the original connection to the alternative connection by control of selecting the copy cell data while carries out switching from the alternative connection to the original connection by control of selecting the original cell data (see FIG. 1, a VP switch 5-5 switches from working VP1 connection to the protection VP2 connection by control of selecting a duplicated/copied ATM cells, and switching from protection VP2 connection to the working VP1 connection by control of selecting an original ATM cells, i.e. UPSR with 1+1 APS revertive switching). Ellis'292 discloses a cell selection control unit (see FIG. 9, a combined system of common control processor 100 and STS protection controller 115).

In view of this, having the system of Naohiro'414 and then given the teaching of Kojui'573, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Naohiro'414 as taught by Ellis'292 for the same motivation and purpose as described above in claim 6.

***Allowable Subject Matter***

8. Claims 13,14, 17, 18, 20 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claim 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N Moore whose telephone number is 571-272-3085. The examiner can normally be reached on M-F: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

INM  
9/14/04



**BRIAN NGUYEN**  
**PRIMARY EXAMINER**